

Some Sphaeromatid Isopods (Crustacea) from Southern and South-western Australia, with the Description of a New Genus and Two New Species

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Abstract

The taxonomy of some sphaeromatid isopods from southern and south-western Australia is discussed. In the subfamily Sphaeromatinae: *Cynodoce longicaudata* Baker is designated the type species of *Platynympha*, gen. nov.; *Waiteolana gibbera*, sp. nov. is described from Western Australia, and the genus *Waiteolana* Baker is shown to be hemibranchiate, not platybranchiate as previously thought. In the subfamily Dynameninae: *Moruloidea tumida*, sp. nov. is described from Western Australia, and *Euvallentinia darwini* (Cunningham) (not known from Australia) and *Cassinidopsis tasmaniae* Baker are transferred to *Moruloidea* Baker (*Euvallentinia* Stebbing becoming a junior synonym of *Moruloidea*); the genus *Pseudosphaeroma* Chilton is shown to be eubranchiate, not hemibranchiate as currently believed, and *P. campbellense* Chilton is recorded from Australia for the first time; *Cassinidopsis tuberculata* Sivertsen and Holthuis (from the South Atlantic) is transferred to the genus *Pseudosphaeroma*, while *Pseudosphaeroma barnardi* Monod (from Africa), *P. callidum* Hurley and Jansen (from New Zealand) and *P. jakobii* Loyola e Silva (from Brazil) are excluded from this genus; *Amphoroidella* Baker and *Platycerceis* Baker are formally raised to full generic rank and generic diagnoses are provided. The genus *Artopoles* Barnard (from Africa) is transferred from the sub-family Cassidininae to the subfamily Dynameninae.

Introduction

Since Baker's work on the Sphaeromatidae (1908, 1910, 1911, 1926, 1929) and Hale's (1929) review of the South Australian species, few taxonomic studies have considered the Australian members of this family in detail. Recently, however, the present author has been involved in an intensive investigation of the sphaeromatid fauna of Queensland (e.g. Holdich and Harrison 1980, 1981a, 1981b, 1983; Harrison and Holdich 1982a, 1982b). During the course of that study a number of collections containing specimens from other regions of Australia were examined. Some of these specimens belonged to species which were new to science, while others illustrated taxonomic points of relevance to the family as a whole. The present paper considers some of these specimens.

In the following descriptions the terms platybranchiate, hemibranchiate and eubranchiate occur. Bowman (1981) and Iverson (1982) replaced the incorrectly formed subfamily names Platybranchiatinae, Hemibranchiatinae and Eubranchiatinae with correctly formed names.

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However, as the older terms are in general use and are widely understood, they will be retained here as vernacular descriptive terms (with no nomenclatural status) to indicate the presence or absence of transverse folds on pleopods 4 and 5, i.e. platybranchiate, all rami lacking transverse folds; hemibranchiate, with only the endopods folded; and eubbranchiate, with all rami folded. Within this family, members of the subfamily Cassidininae are platybranchiate, members of the Sphaeromatinae are hemibranchiate, and members of the Dynameninae are eubbranchiate.

Systematics

Order Isopoda Latreille, 1817

Family Sphaeromatidae Milne Edwards, 1840

Subfamily Sphaeromatinae Milne Edwards, 1840

Genus *Platynympha* gen. nov.

Type Species

Cymodoce longicaudata Baker, 1908.

Diagnosis

Hemibranchiate. Endopod of pleopod 3 lacking branchial folds. Body moderately flattened. Cephalosome with median rostral process not obvious in dorsal view. Coxal plates of pereonites and lateral margins of pleon as separate, curved, acute extensions. Pleon bearing two long, straight, parallel sutures at each side, extending to postero-lateral angle. Pleotelsonic apex with marked notch bearing median tooth. Antennular peduncle article 1 with postero-distal angle extended distally as long acute process. Pereopods 1 to 3 with superior surfaces of ischium and merus bearing, at most, several short setae or spines. Pleopod 5 exopod with apex and internal margin of distal article covered with fine teeth; anterior surface of distal article bearing long, projecting, toothed boss; medio-distal angle of proximal article bearing two small toothed bosses. Uropod with rami sub-equal, styliform, extending well beyond pleotelsonic apex. Sexual dimorphism not obvious.

Adult Male

Penes slender, tapering, separate to base. Appendix masculina arising from medio-proximal angle of endopod of pleopod 2 and extending well beyond ramal apex. Maxillipedal palp articles 2 to 4 bearing pronounced setigerous lobes.

Ovigerous Female

Mouthparts metamorphosed; mandibles partially fused with cephalosome, incisor and molar processes absent; maxillule as two simple lobes; maxilla as three simple lobes; maxillipedal endite expanded proximally as setigerous lobes, palp not reduced but lobes short, lacking setae. Brood pouch formed from four pairs of oostegites arising from pereonites 1 to 4 and overlapping in mid-line. Anterior pair of oostegites each with longitudinal fold, such that anterior region of oostegite covers posterior mouthparts. Brood not housed in marsupium thus formed, but held in five pairs of internal pouches. Ventral pockets absent.

Remarks

Platynympha gen. nov. differs from the genus *Cymodoce*, *sensu stricto* (as defined in Harrison and Holdich, in press) by the smooth nature of the body, the form of the coxal plates, the form of the lateral and posterior margins of the pleon, the structure of the pleotelson, the form of the epistome, the structure of the antennules, the more elongate posterior pereopods, the form of the uropods, and in lacking sexual dimorphism.

Platynympha does not closely resemble any other known hemibranchiate genus. This genus currently contains only the type species, *P. longicaudata*, from South Australia.

Etymology

Greek, *Platus* + *nympha*, i.e. flat nymph (feminine). (In Greek mythology Cymodoce was a nymph, and this genus is founded for a species currently housed in the genus *Cymodoce* Leach.)

Platynympha longicaudata (Baker, 1908), comb. nov.

Figure 1

Cymodoce longicaudata Baker, 1908: 139, 140, 160, pl. 3; – Hale, 1927: 319; – Hale, 1929: 287, 288; – Nierstrasz, 1931: 201.

Material Examined

Blanche Harbour (16 km south of Port Augusta), South Australia. On fine sand beach with *Zostera* sp. and *Posidonia* sp. Lower shore. 4 adult males, 3 sub-adult males, 2 ovigerous females, 2 non-ovigerous females, 2 immature specimens, 24 juveniles. Coll. G. Hartmann, 05.xii.1975. (Zoological Museum, University of Hamburg). – Proper Bay, Port Lincoln, South Australia. South end of bay among *Posidonia* sp. mixed with algae. 1 non-ovigerous female, 1 juvenile. Coll. G. Hartmann, 04.xii.1975 (Zoological Museum, University of Hamburg). Type specimens are housed in the South Australian Museum.

Description

Adult Male

Dorsal surface smooth, lacking tubercles and setae. Coxal plates of pereonites 1 to 6 long, curved, acute; coxal plates of pereonite 7 short, broadly rounded. Lateral margins of pleon curved, acute; posterior margin smoothly arcuate. Pleotelson sub-triangular, flattened, lacking anterior dome; posterior half with median longitudinal carina. Apex of pleotelson with broad shallow notch bearing elongate, acute, median tooth extending well beyond notch margins; posterior half of pleotelsonic carina extending full length of apical tooth.

Antennular peduncle article 1, postero-distal extension extending almost to distal margin of article 2; peduncle article 2 with pronounced, acute, dorsal tooth; 24-articled flagellum extending to level of pereonite 3. Antenna with 24-articled flagellum extending to level of pereonite 6. Epistome apex truncate; each postero-lateral extension terminating as acute conical spine. Mandibular incisor processes dentate; left mandible with lacinia mobilis

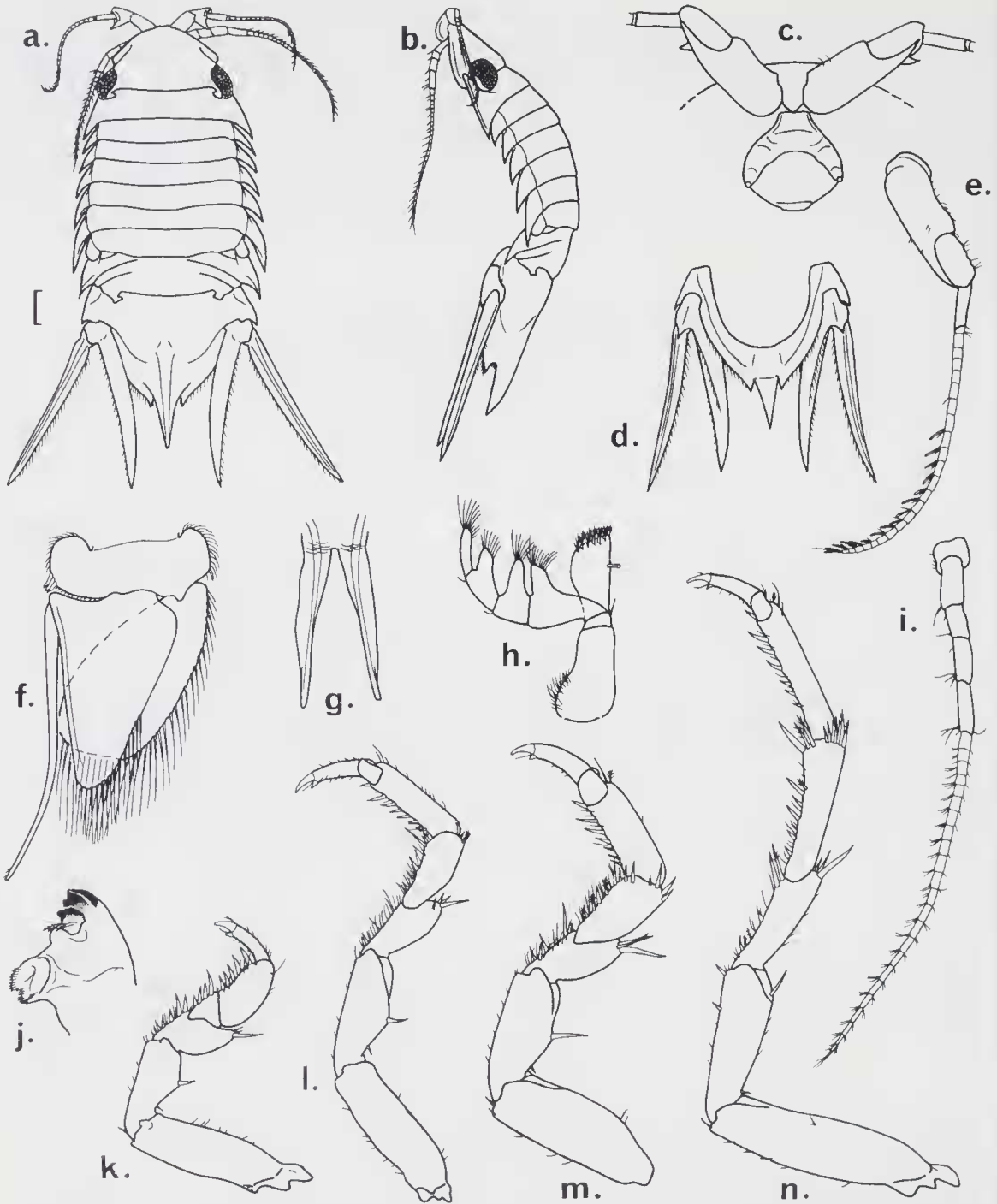


Figure 1

Platynympha longicaudata (Baker), comb. nov. Adult male, 11.9 mm; (a) dorsal; (b) lateral; (c) epistome, labrum and antennular peduncles, ventral; (d) pleotelson and uropods, ventral; (e) antennule; (f) pleopod 2; (g) penes; (h) maxilliped; (i) antenna; (j) left mandible; (k) to (n) pereopods 1, 2, 4 and 7 respectively. Scale line represents 1 mm.

dentate; mandibular palps well formed. Maxillular inner lobe with four pectinate spines; outer lobe with group of moderately slender, curved, simple spines. Maxilla with two outer lobes each bearing approximately nine slender curved spines; inner lobe bearing plumose spines. Maxillipedal palp articles 3 and 4 each bearing short, superior, distal seta. Pereopods becoming longer posteriorly; pereopod 7 very slender, almost twice length of pereopod 1. Penes each seven times as long as basal width, tapering to narrowly rounded apex. Pleopod 1 endopod just shorter than exopod; medial margin of endopod with longitudinal oblique groove; proximal lateral margin of exopod with long stout spine. Pleopod 2 rami similar to those of pleopod 1 but sub-equal in length; endopod lacking medial groove; exopod lacking lateral spine. Appendix masculina 1.5 times length of endopod, with three short, medial, sub-terminal setae. Pleopod 3 with endopod broad, sub-ovate, just shorter than sub-elliptical exopod, with medial margin straight; exopod with complete distal articulation. Bases of pleopods 1 to 3 each bearing three medial coupling hooks. Pleopod 4 endopod narrow, sub-elliptical, with deep, medial, sub-terminal notch; exopod sub-triangular with complete sub-apical articulation and several short terminal setae. Pleopod 5 endopod elongate, sub-reniform; exopod narrow with complete sub-terminal articulation and lateral fringe of short setae. Uropodal rami sub-equal.

Ovigerous Female

Resembling male except in sexual characters.

Non-ovigerous Female

As above but lacking brood pouch, and mouthparts not metamorphosed. Oostegites present as rudimentary 'buds'.

Sub-adult Male

Resembling non-ovigerous female but lacking oostegite 'buds' and bearing penes. Penes relatively shorter than those of adult male. Appendix masculina forming along medial margin of endopod of pleopod 2, but not free.

Immature Specimen

Resembling non-ovigerous female but lacking oostegite 'buds'.

Remarks

Specimens of this species bear a superficial resemblance to specimens of *Platycerceis hyalina* Baker (see below) but are easily distinguished by having a long median tooth in the pleotelsonic apical notch.

P. longicaudata has only been collected from eel-grass (*Zostera* sp. or *Posidonia* sp.) and can be common in certain areas. Hale (1927: 319), collecting in the Bay of Shoals, Kangaroo Island, said, 'This species was so plentiful in parts of the Bay that we were able to fill a quart bottle with specimens after half an hour of hand dredging amongst *Zostera*'.

Genus *Waiteolana* Baker, 1926

Waiteolana Baker, 1926: 276, 277; – Nierstrasz, 1931: 222; – Holdich and Harrison, 1981a: 634, 635.

Type Species

Waiteolana rugosa Baker, 1926.

Other Species

Waiteolana gibbera sp. nov. (Western Australia).

Waiteolana tuberculata Kussakin, 1967 (S.W. Atlantic Ocean).

Diagnosis

Hemibranchiate. Endopod of pleopod 3 lacking branchial folds. Both sexes with cephalosome, pereon and pleon lacking dorsal extensions. Pleon bearing two long sutures at each side; sutures extending to postero-lateral margin. Pleotelson evenly domed, lacking prominent ridges or bosses (but bearing tubercles or sculpturing in all known species). Pleotelsonic apex narrowly truncate, lacking notch, foramen, vertical incision or median extension; bearing very shallow, longitudinal, ventral depression. Each mandible with molar process modified as thin, narrow, acute cutting edge. Maxillipedal palp articles 2 to 4 bearing pronounced setigerous lobes. Pereopods 1 to 3 with superior surfaces of ischium and merus bearing, at most, several short setae or spines. Pleopod 5 exopod with two apical toothed bosses, one sub-apical medial boss, and two juxtaposed medial bosses. Uropodal endopod lamellar, at least twice length and twice breadth of reduced exopod. Sexual dimorphism not obvious.

Adult Male

Penes long, separate to base. Appendix masculina present, arising from medio-proximal angle of endopod of pleopod 2 and extending beyond ramal apex.

Ovigerous Female

Mouthparts not metamorphosed. Brood pouch formed from two pairs of oostegites arising from pereonites 3 and 4 and just overlapping in mid-line. Brood not housed in marsupium thus formed, but held in internal pouches (number not currently known). Ventral pockets absent.

Remarks

In this genus the mandible is markedly modified (cf. Baker 1926: 276). The molar process forms a small chisel-like blade, rather than a crushing or triturating surface, but as nothing is known of the feeding habits or food preferences of species in this genus, the purpose of these blades is not known.

Species of *Waiteolana* are known only from the south-east and south-western coasts of Australia (and possibly off the coast of Argentina – see Discussion).

Waiteolana gibbera sp. nov.

Figures 2, 3

Holotype

Adult male, 5.6 mm. Western Australian Museum Reg. No. 257-82. Coll. B.R.W., 04.ii.1962. From Garden Island, Western Australia (32°15'S, 115°09'E). Southern end of island. On gorgonians. Depth 3.5-4.5 m.

Paratypes

From type locality, collection details as for holotype. 7 adult males, 1 ovigerous female, 3 non-ovigerous females, 4 immature specimens (Western Australian Museum Reg. No. 68-80).

Description

Adult Male

Body deeply vaulted, lateral margins sub-parallel. Pereonites 1 to 4 dorsally arched (giving species its name). Posterior pereonites short and weakly ornamented in mid-line. Coxal plates of pereonites 2 to 7 separate, apically sub-acute with short longitudinal ridge; proximally each plate bearing prominent median tubercle. Pleon dorsally tumid with many low circular tubercles. Main dome of pleotelson weakly pronounced, bearing many scattered low tubercles; posterior region of pleotelson finely granulose, tapering to truncate apex.

Antennular peduncle articles smooth, not expanded anteriorly; 6-articled flagellum extending to level of pereonite 1. Antenna sub-equal in length to antennule; 8-articled flagellum extending to level of pereonite 1. Epistome sub-quadrangle, anterior margin weakly emarginate, slightly projecting but not obvious in dorsal view. Labrum sub-circular with slight median distal notch. Mandibular incisor processes markedly dentate; left mandible with lacinia mobilis tridentate. Maxillular lobes slender; outer lobe with approximately eight curved spines. Maxillar lobes slender, bearing sub-linear spines. Maxillipedal palp articles 3 to 5 bearing very short, fine superior setae. Pereopods robust, each with basis and ischium lacking superior spines; pereopods 2 to 7 each with merus and carpus bearing several superior distal spines. Penes each ten times as long as broad, distally narrow. Pleopod 1 basis bearing four medial coupling hooks; endopodal medial margin bearing longitudinal fold and fine, short, marginal setae. Pleopod 2 basis with three coupling hooks; endopodal medio-proximal angle acute, overlapping basis slightly. Appendix masculina narrow, 1.5 times length of endopod. Pleopod 3 basis with two coupling hooks; endopodal medial margin straight; exopod with complete distal articulation. Pleopod 4 endopod with apex obtusely angled, lacking plumose setae; exopod with complete distal articulation, apex lacking plumose setae. Pleopod 5 endopod sub-reniform; exopod with complete distal articulation. Uropodal endopod almost reaching pleotelsonic apex, sub-elliptical with sub-apical lateral notch; exopod 0.3 times length of endopod, sub-elliptical with lateral distal indentation.

Ovigerous Female

Resembling male except in sexual characters.

Non-ovigerous Female

As above but lacking brood pouch. Oostegites present as rudimentary 'buds.'

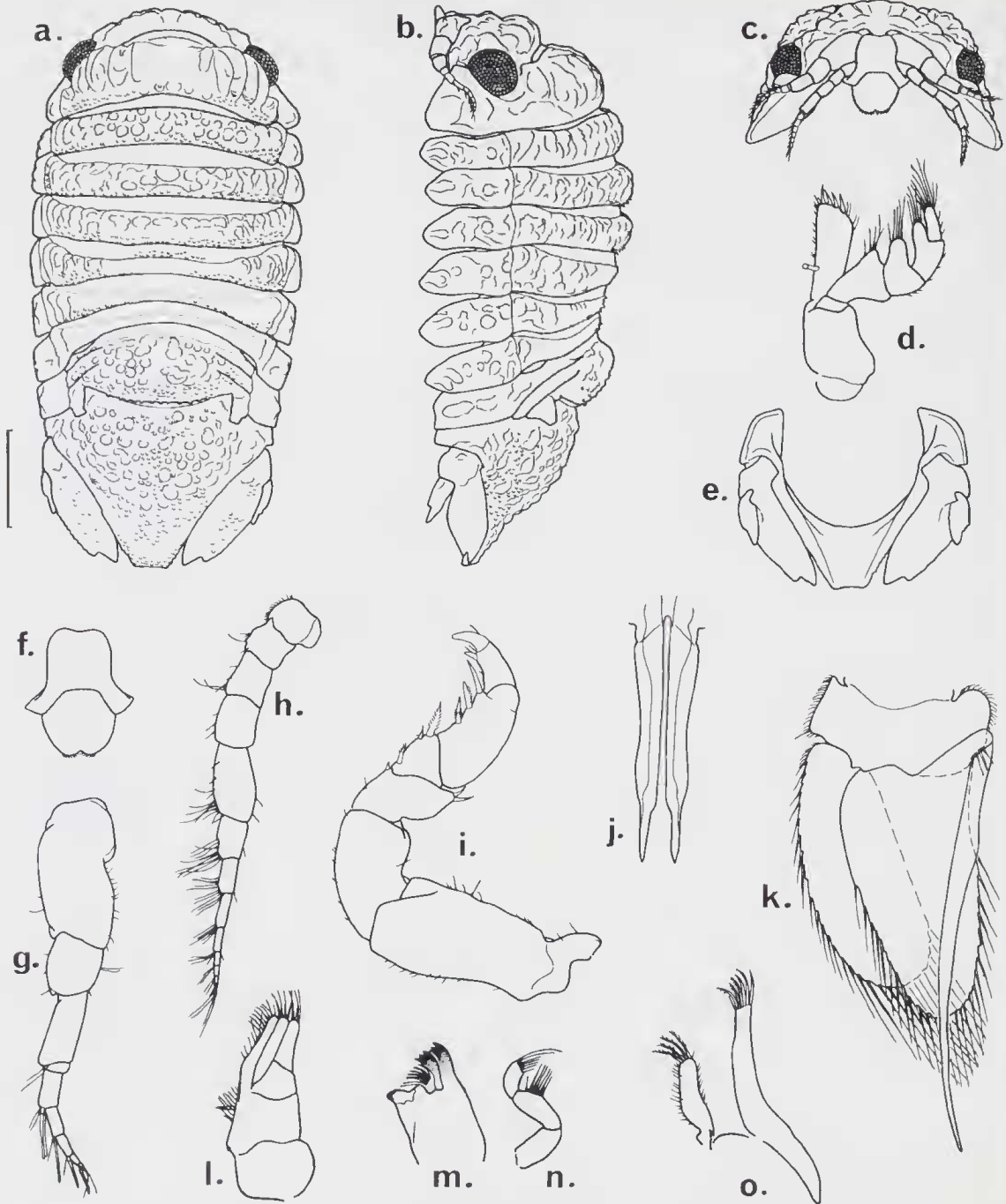


Figure 2

Waiteolana gibbera sp. nov. Adult male (paratype), 5.61 mm; (a) dorsal; (b) lateral; (c) anterior, ventral; (d) maxilliped; (e) pleotelson and uropods, ventral; (f) epistome and labrum; (g) antenna; (h) antenna; (i) pereopod 1; (j) penes; (k) pleopod 2; (l) maxilla; (m) left mandible; (n) mandibular palp; (o) maxillule. Scale line represents 1 mm.

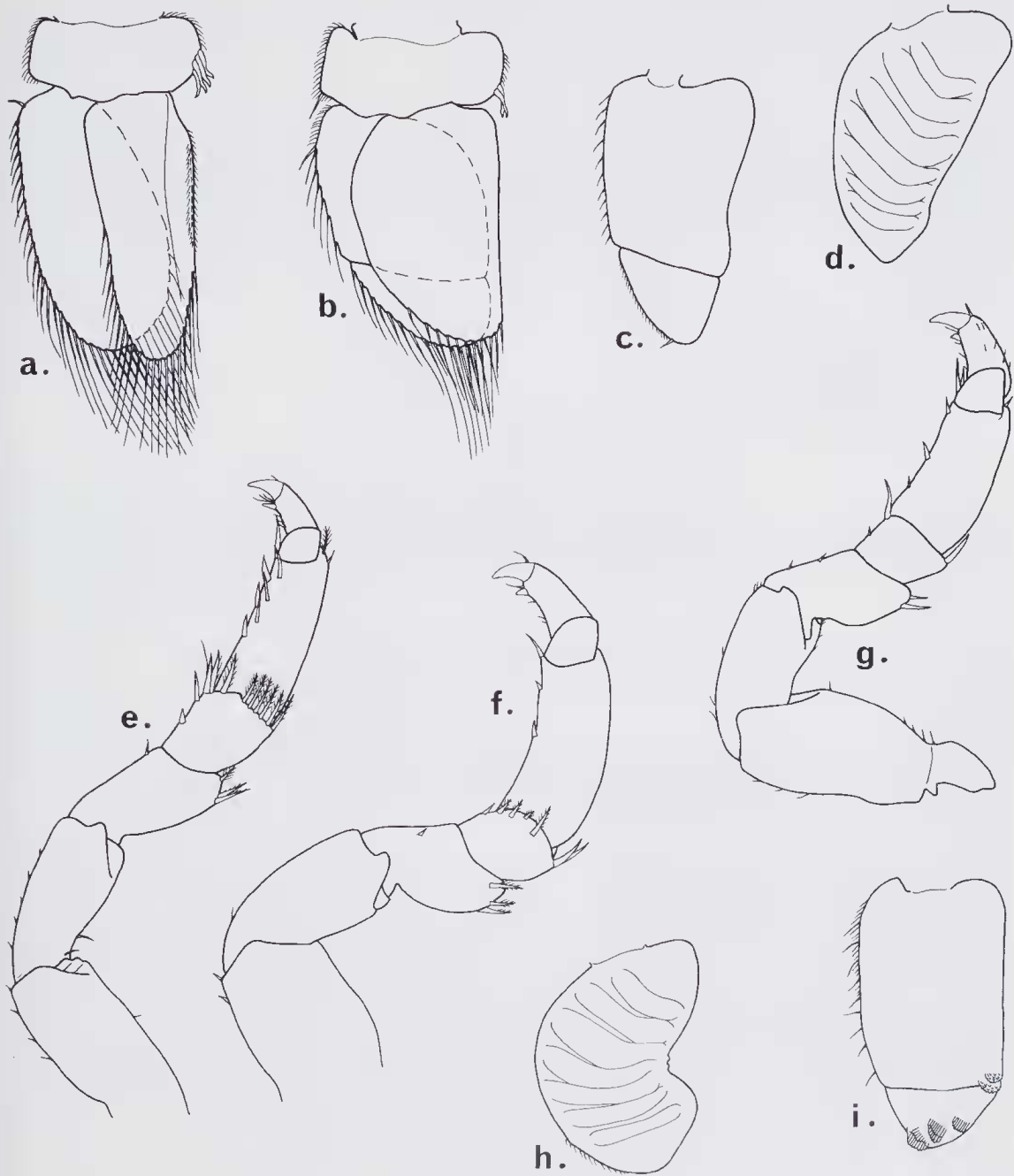


Figure 3

Waiteolana gibbera sp. nov. Adult male (paratype); (a) pleopod 1; (b) pleopod 3; (c) pleopod 4, exopod; (d) pleopod 4, endopod; (e) to (g) pereopods 7, 4 and 2 respectively; (h) pleopod 5, endopod; (i) pleopod 5, exopod.

Immature Specimen

Resembling non-ovigerous female but smaller and lacking oostegite 'buds' at bases of pereopods 3 and 4.

Remarks

W. gibbera can readily be distinguished from *W. rugosa* by its blunt, rather than apically acute, epistome, and by its apically narrower uropodal endopods. *W. gibbera* is known only from the shallow sub-littoral region of Garden Island, near Perth, Western Australia.

Etymology

Waiteolana + latin *gibbera* i.e. hump-backed.

Subfamily Dynameninae Bowman, 1981

Genus *Moruloidea* Baker, 1908

Moruloidea Baker, 1908: 150; – Baker, 1926: 276; – Hale, 1929: 292, 297, 298.

Vallentinia Stebbing, 1914a: 351. (preoccupied name) (new synonymy).

Euvallentinia Stebbing, 1914b: 944; – Barnard, 1920: 374; – Nierstrasz, 1931: 218; – Loyola e Silva, 1964: 3, 4. (new synonymy).

Type Species

Moruloidea lucertosa Baker, 1908 (South Australia).

Other Species

Moruloidea darwini (Cunningham, 1871), comb. nov. (Argentina, Falkland Islands, Kerguelen).

Moruloidea tasmaniae (Baker, 1926), comb. nov. (Tasmania).

Moruloidea tumida sp. nov. (Western Australia).

Generic Diagnosis

Eubranchiate. Antennular peduncle article 1 not extended anteriorly as plate. Both sexes with pereon and pleon lacking dorsal extensions. Coxal plates of pereonite 5 expanded, overlapping those of pereonites 4 and 6 when body folded. Coxal plates of pereonites 6 and 7 with anterior margins concave. Pleon bearing two curved parallel sutures at each side; sutures extending to postero-lateral margin. Both sexes with both uropodal rami lamellar; exopod short, acute; endopod usually emarginate, but may be rounded (interspecific variation). Maxillipedal endite slender; palp articles 2 to 4 with pronounced, elongate, setigerous lobes. Pleopod 5 exopod with one apical toothed boss, one sub-apical boss, and two juxtaposed medio-distal bosses. Sexual dimorphism not pronounced.

Adult Male

Penes separate, short, with semi-circular tips. Appendix masculina narrow, arising from medio-proximal angle of endopod of pleopod 2 and extending beyond ramal apex; margins sub-parallel; tip rounded. Antennal peduncular articles robust; article 5 relexed. Pereopod

1 very robust; propodus usually bearing pronounced, conical, inferior extension, but extension may be absent (interspecific variation). Dorsal tuberculation may be more pronounced than in female.

Ovigerous Female

Mouthparts not metamorphosed. Brood pouch formed from three pairs of narrow sub-equal oostegites arising from pereonites 2 to 4 and just overlapping in mid-line. Brood not housed in marsupium thus formed, but in four pairs of internal pouches. Ventral pockets absent. Antennal peduncle less robust than that of male; article 5 not reflexed. Percopod 1 propodus lacking inferior extension.

Remarks

Due to the confusion surrounding this genus (see Discussion) the type species will be redescribed here.

Moruloidea lacertosa Baker, 1908

Figure 4

Moruloidea lacertosa Baker, 1908: 150, 151, 161, pl. 7; – Baker, 1929: 58, 61, pl. 1; – Hale, 1929: 297, 298.
Cassidinopsis lacertosa – Nierstrasz, 1931: 218.

Material Examined

St Vincent Gulf, South Australia. 1 adult male (Holotype, South Australian Museum Reg. No. C358), 1 sub-adult male (South Australian Museum Reg. No. C361).

Description of Adult Male Holotype

Dorsal surface of body granular, tuberculate. Pereonites 2 to 6 each with transverse row of low irregular tubercles. Pleon with several median tubercles. Pleotelsonic dome bearing many scattered, low, smooth tubercles and raised antero-median bulge; apex with deep ventral groove.

Antennular peduncle articles 1 and 2 sculptured; flagellum 13-articled (not 11-articled, cf. Baker, 1908: 150), extending to level of pereonite 1. Antenna 2.5 times length of antennule; flagellum 13-articled (not 11-articled, cf. Baker, 1908: 151). Epistome broader than long with transverse ridge. Percopod 1 propodus lacking inferior conical extension. Pleopod 2 with appendix masculina 1.3 times length of endopod, straight, proximal half slightly broader than distal half, distal half with margins sub-parallel; apex rounded. Uropodal endopod not reaching level of pleotelsonic apex; exopod lanceolate, dorsally carinate, slightly shorter than endopod.

Remarks

In 1929 Baker described an ovigerous female specimen of *M. lacertosa* (1929: 58, 61, pl. 1, figs 9-11). He stated that the female had the antennae less strongly developed than the male, and that the dorsal margin of the apical pleotelsonic notch was more extended. *M. lacertosa* is known only from the above three specimens and the collection details for the female are not known.

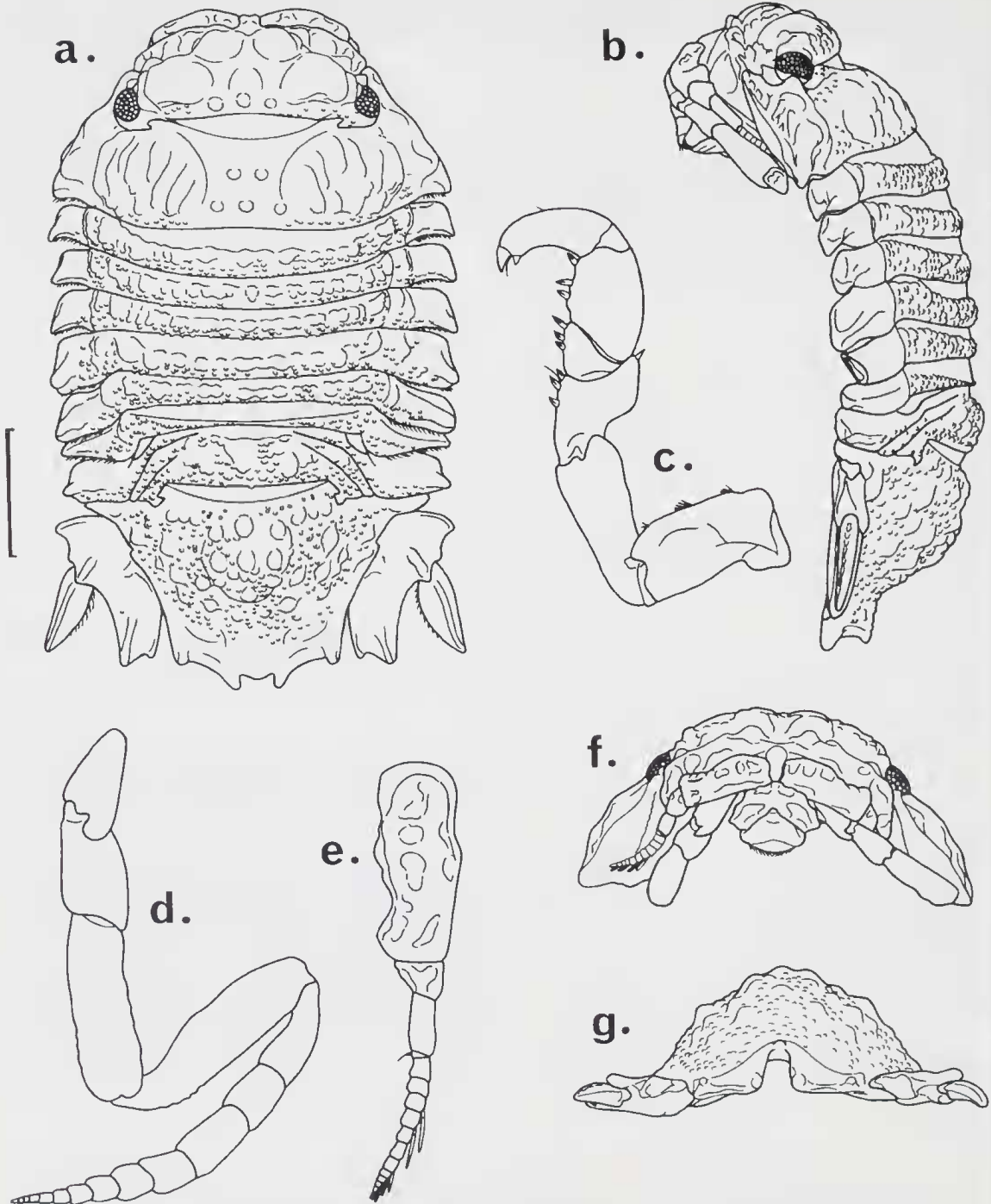


Figure 4 *Moruloidea lacertosa* Baker. Adult male (holotype), 5.17 mm: (a) dorsal; (b) lateral; (c) pereopod I; (d) antenna; (e) antennule; (f) anterior, ventral; (g) pleotelson and uropods, posterior. Scale line represents 1 mm.

Moruloidea tumida sp. nov.

Figure 5

Holotype

Adult male, 6.9 mm. Western Australian Museum Reg. No. 69-80. Coll. 13.iii.1957 from Bathhurst Point, Rottneest Island, Western Australia (32°01'S, 115°28'E).

Paratypes

From type locality, collection details as for holotype. 1 non-ovigerous female (Western Australian Museum Reg. No. 258-82); coll. L. Glauert, 1 ovigerous female (Western Australian Museum Reg. No. 259-82).

Description

Adult Male

Cephalosome covered with prominent hemispherical protrusions. Pereonite 1 longer than succeeding pereonites, with lateral margins expanded, bilobed. Pereonites 1 to 5 each with transverse row of hemispherical tubercles. Coxal plates of pereonite 5 sub-elliptical, keeled. Pleon with anterior segment visible across mid-line; posterior segment bearing large median conical tubercle and two smaller rounded tubercles. Pleotelson with two conical projections in mid-line, and one prominent tubercle each side of these; posterior region of dome with several smaller tubercles. Pleotelsonic apex broadly truncate with triangular median extension; in posterior view, margin sinuous with ventral median groove.

Antennular peduncle article 1 weakly sculptured; 11-articled flagellum extending to level of pereonite 1. Antennal peduncle longer than entire antennule; 13-articled flagellum extending to level of pereonite 7 when antenna fully extended. Epistome broader than long with a transverse ridge; apex acute. Mouthparts not dissected (see non-ovigerous female). Pereopod 1 extremely robust; propodus with pronounced, conical, inferior extension; dactylus flexed inferiorly giving prehensile effect. Pereopods 2 to 7 slender, unmodified. Penes each twice as long as broad. Pleopod 1 basis with three medial coupling hooks. Pleopod 2 with appendix masculina 1.25 times length of endopod. Pleopod 3 exopod with complete, oblique, sub-terminal articulation. Exopods of pleopods 4 and 5 each with complete sub-terminal articulation. Uropodal endopod not reaching level of pleotelsonic apex; exopod half length of endopod, sub-elliptical, with short terminal extension.

Ovigerous Female

Cephalosome weakly bilobed. Pereon lacking obvious tuberculation; brood visible through thin cuticle behind cephalosome. Pleon with three low transverse tubercles, central being largest. Pleotelson with smooth median protuberance and weaker protuberance either side of this.

Non-ovigerous Female

Dorsal tuberculation as in adult male. Antennal peduncle article 5 not dilated or reflexed. Mandibles unmodified; incisor processes smoothly rounded; lacinia mobilis of left mandible capable of folding flat. Maxillule and maxilla of usual sphaeromatid form but inner lobe of maxilla narrow and more apically acute than usual in this family. Maxillipedal palp articles 2 to 4 bearing short superior setae.

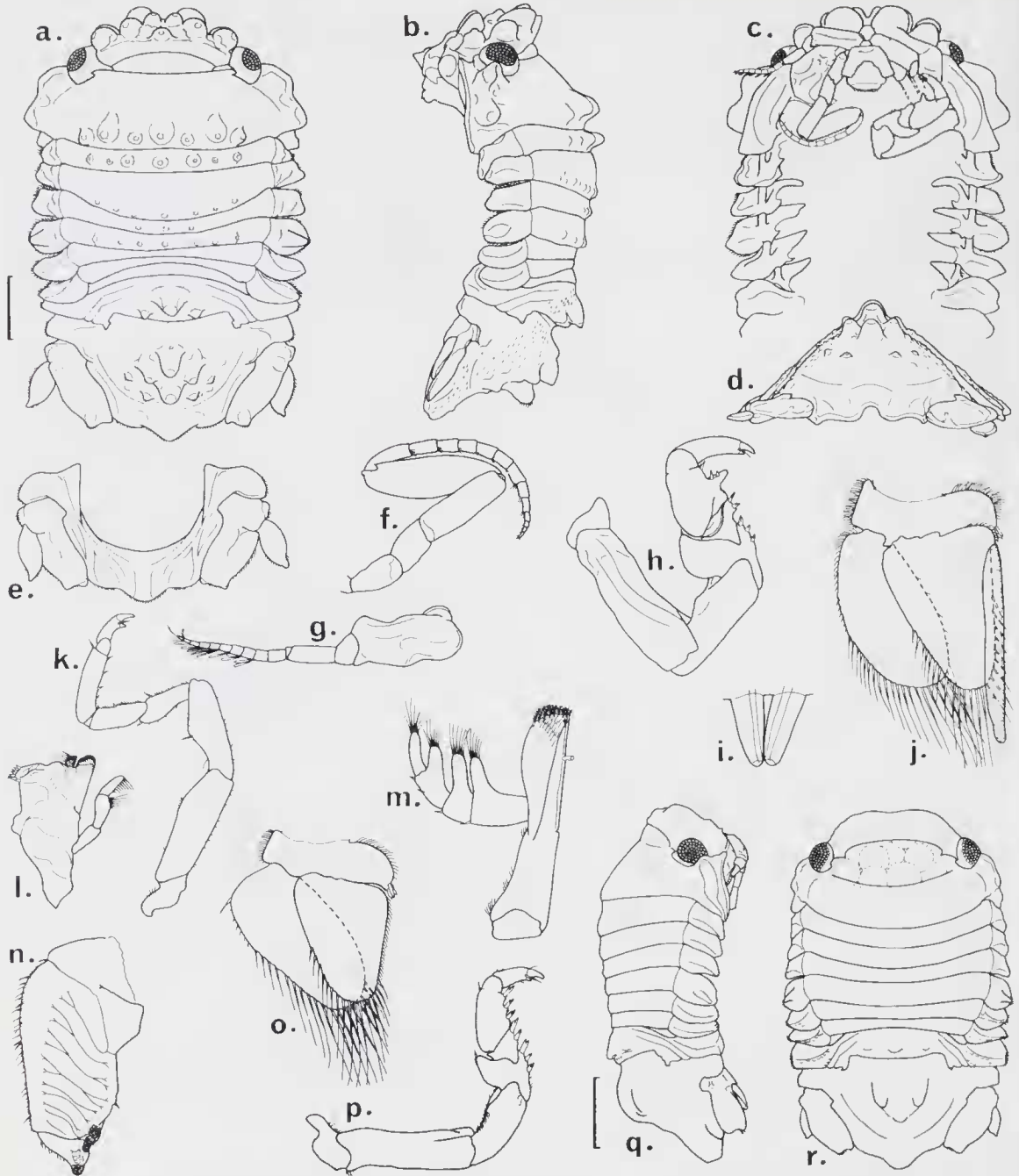


Figure 5

Moruloidea tumida sp. nov. Adult male (holotype), 6.9 mm; (a) dorsal; (b) lateral, (c) ventral (anterior and lateral regions); (d) pleotelson and uropods, posterior; (e) pleotelson and uropods, ventral; (f) antenna; (g) antennule; (h) pereopod I; (i) penes; (j) pleopod 2; (k) pereopod 2; (l) left mandible; (n) pleopod 5, exopod; (o) pleopod 1. Non-ovigerous female (paratype); (m) maxilliped; (p) pereopod I. Ovigerous female (paratype), 5.06 mm; (q) lateral; (r) dorsal. Scale line represents 1 mm in each case.

Remarks

The male and non-ovigerous female specimens of *M. tumida* sp. nov. can be distinguished from specimens of *M. darwinii* and *M. tasmaniae* by being dorsally tuberculate, not smooth, and from *M. lacertosa* by having prominent protuberances on the cephalosome, fewer and larger tubercles on the pleotelson, and by having an inferior conical tubercle on the propodus of pereopod I (in the adult male).

The ovigerous female of *M. tumida* (which is almost smooth) can be separated from *M. tasmaniae* by having the apex of the uropodal endopod emarginate, not rounded, and from *M. darwinii* by having three low elevations on each of the pleon and pleotelson, not one central elevation.

Moruloidea tumida is known only from the type locality, and no habitat details are known.

Etymology

Moruloidea + latin *tumida*, i.e. swollen.

Genus *Pseudosphaeroma* Chilton, 1909

Pseudosphaeroma Chilton, 1909: 653, 654; – Nierstrasz, 1931: 211; – Monod, 1931b: 67, 70-78; – Hurley and Jansen, 1977: 67; – Poore, 1981: 346.

Paradynamenopsis Menzies, 1962: 144; – Carvacho, 1975: 225-227; – Poore, 1981: 346.

Type Species

Pseudosphaeroma campbellense Chilton, 1909 (New Zealand, S.E. Australia – see below).

Other Species

Pseudosphaeroma lunadae (Menzies, 1962) (Chile)

Pseudosphaeroma tuberculatum (Sivertsen and Holthuis, 1980), comb. nov. (Tristan da Cunha).

Diagnosis

Eubranchiate. Antennular peduncle article 1 not extended anteriorly as plate. Both sexes with pereon and pleon lacking dorsal processes. Pleonal posterior margin bearing two curved parallel sutures at each side. Both sexes with both uropodal rami lamellar. Pleotelsonic apex entire, upturned. Maxillipedal palp articles 2 to 4 bearing low setigerous lobes. Pleopod 5 exopod with apical toothed boss, extended sub-apical boss, and medial boss. Branchial folds on rami of pleopods 4 and 5 few in number, not covering entire ramal surfaces. Sexual dimorphism not pronounced.

Adult Male

Penes separate, broad, with semi-circular tips. Appendix masculina arising from medio-proximal angle of endopod of pleopod 2 and extending beyond ramal apex, dilating distally. Dorsal tuberculation more pronounced than that of female. Pereopods with inferior pads of fine setae.

Ovigerous Female

Mouthparts not metamorphosed. Brood pouch formed from three pairs of oostegites arising from pereonites 2 to 4 and overlapping well in mid-line. Oostegites increasing in size posteriorly. Brood not housed in marsupium thus formed, but in four pairs of internal pouches. Ventral poekets absent. Pereopods lacking inferior pads of setae.

Remarks

Cassidinopsis tuberculata Sivertsen and Holthuis is actually a species of *Pseudosphaeroma* (personal observation of type specimens). Of the additional species currently placed in *Pseudosphaeroma*, *P. barnardi* Monod, 1931 (from Africa) differs from species of *Pseudosphaeroma*, *sensu stricto* in not having the pleotelsonic apex deflected dorsally, in having the uropodal exopod considerably shorter than the endopod, in having the oostegites of the ovigerous female not reaching the mid-line, and (perhaps less importantly) in lacking dorsal tuberculation. *P. barnardi* cannot be retained in the genus *Pseudosphaeroma*, but its correct generic placement is unknown. *Pseudosphaeroma jakobii* Loyola e Silva, 1959 differs from species of *Pseudosphaeroma*, *sensu stricto* in not having the pleotelsonic apex deflected dorsally, in having the uropodal exopod considerably shorter than the endopod, and in having the ovigerous female lacking oostegites. This species cannot be retained in the genus *Pseudosphaeroma*. *P. jakobii* (from Brazil) appears to be closely related to '*Cassidinidea tuberculata* Richardson, 1912 (from the east coast of Mexico) and '*Exosphaeroma platense* Giambiagi, 1922 (from Argentina), and a new genus will probably be needed to house these three eastern American species. *Pseudosphaeroma callidum* Hurley and Jansen, 1977 (from New Zealand) differs from species of *Pseudosphaeroma* in not having the apex of the pleotelson deflected dorsally, in having the exopod of the uropod medially serrate and laterally excavate, in not having the tergum of pereonite 7 reaching the lateral margins of the body in dorsal view, and (perhaps less importantly) in lacking dorsal pleotelsonic tuberculation. *P. callidum* cannot be retained in the genus *Pseudosphaeroma*, but its correct generic placement is unknown.

Geographically, *Pseudosphaeroma* is known from New Zealand, Australia, Chile, and the Tristan da Cunha archipelago in the South Atlantic.

Pseudosphaeroma campbellense Chilton, 1909

Figure 6

Pseudosphaeroma campbellensis Chilton, 1909: 654-657; – Stephensen, 1927: 368; – Monod, 1931a: 25; – Hurley, 1961: 270, 271; – Jansen, 1971: 270; – Hurley and Jansen, 1977: 67-69; – Poore, 1981: 346.
Pseudosphaeroma campbellense – Nierstrasz, 1931: 211; – Monod, 1931b: 67, 72-75, 79, 80.

Material Examined

Swan Bay, Port Phillip Bay, Victoria (38°14'S, 144°39'E); pier of the west bank; among barnacles on pier pile; intertidal: 10 adult males, 6 ovigerous females, 4 non-ovigerous females, 5 immature specimens, 1 juvenile. Coll. G. Hartmann, 25.xii.1975 (Zoological Museum, University of Hamburg). Type specimens are located in the Canterbury Museum, New Zealand.

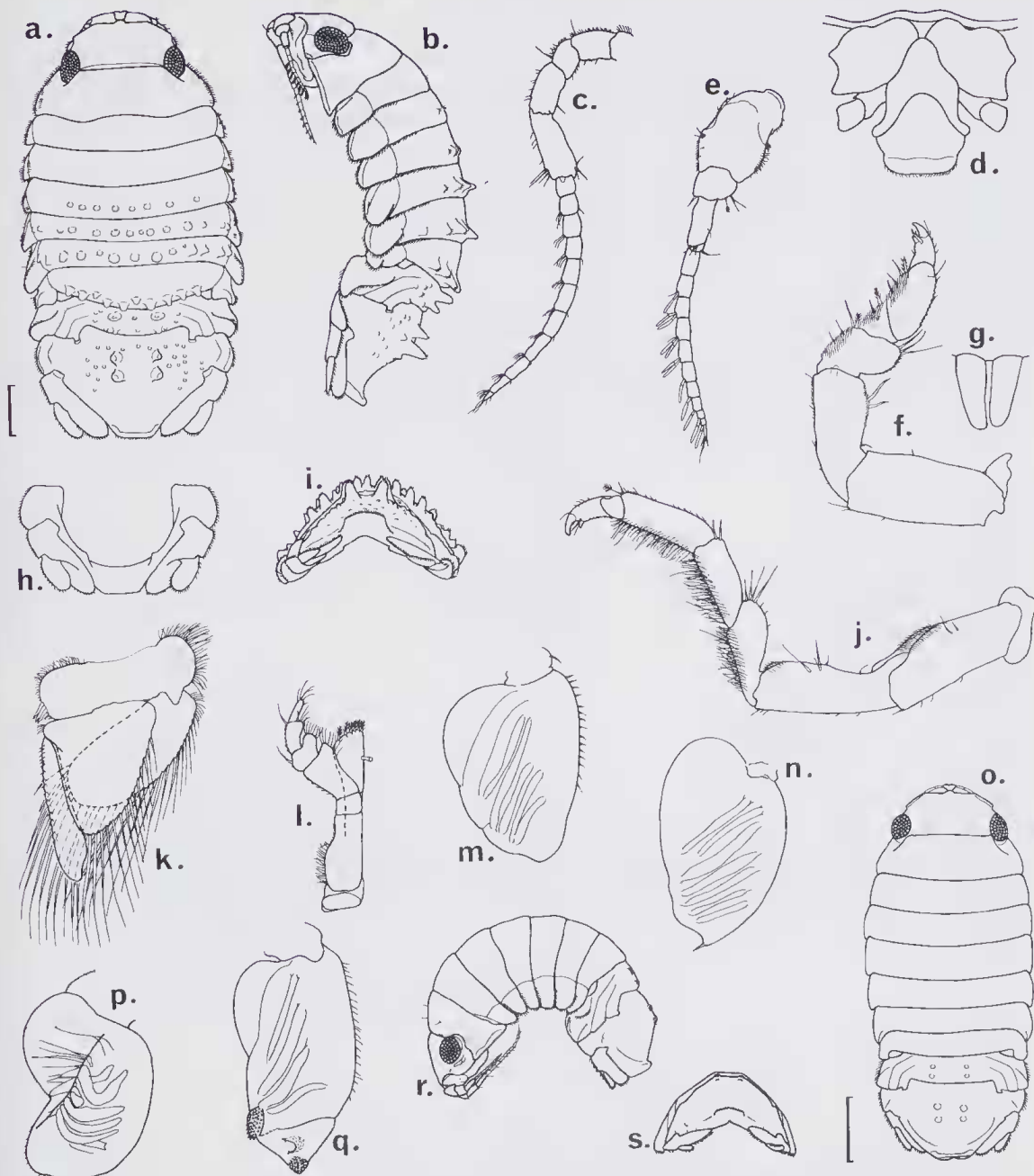


Figure 6

Pseudosphaeroma campbellense Chilton. Adult male, 8.25 mm; (a) dorsal; (b) lateral; (c) antenna; (d) epistome and labrum, bases of antennae, and anterior margin of cephalosome, ventral; (e) antennule; (f) pereopod 1; (g) penes; (h) pleotelson and uropods, ventral; (i) pleotelson and uropods, posterior; (j) pereopod 2; (k) pleopod 2; (l) maxilliped; (m) pleopod 4, exopod; (n) pleopod 4, endopod; (p) pleopod 5, endopod; (q) pleopod 5, exopod. Ovigerous female, 5.52 mm; (o) dorsal; (r) lateral; (s) pleotelson and uropods, posterior. Scale line represents 1 mm in each case.

Description

Adult Male

Pereonites 4 to 7 each with one transverse row of tubercles. Pleon with scattered small tubercles and two extended tubercles each side of mid-line. Pleotelson with scattered small tubercles and two extended tubercles each side of anterior mid-line.

Antennule with 12-articled flagellum extending to level of pereonite 1. Antenna with 11-articled flagellum extending to level of pereonite 2. Epistome lambdoid; apex rounded. Mouthparts unmodified. Pereopods moderately robust; inferior margins of merus, carpus and propodus bearing mats of long fine setae. Penes each three times as long as broad with semi-circular tip. Pleopod 1 basis with three medial coupling hooks; elliptical exopod extending just beyond sub-triangular endopod. Pleopod 2 with appendix masculina 1.3 times length of endopod, clavate, flattened, with lateral sub-terminal emargination. Pleopod 3 exopod with complete sub-terminal articulation. Pleopod 5 exopod with sub-terminal articulation extending from lateral margin almost to medial margin. Uropodal rami with apices rounded; endopod just longer than exopod, extending to level of pleotelsonic apex.

Ovigerous Female

Dorsal surface of cephalosome and pereon smooth. Pleon and pleotelson each with two very low tubercles each side of mid-line. Apical upturning of pleotelson less pronounced than in adult male.

Non-ovigerous Female

As above but lacking brood pouch. Oostegites present as rudimentary 'buds'.

Remarks

The name *Sphaeroma* is neuter, hence the name of this species should bear the neuter termination '-ense' not the masculine or feminine form '-ensis'.

See Discussion for remarks on distribution.

Genus *Amphoroidella* Baker, 1908

Amphoroidella, new sub-genus of *Amphoroidea* – Baker, 1908: 148.

Amphoroidella – Hale, 1929: 292; – Nierstrasz, 1931: 214; – Iverson, 1982: 249, 250.

Amphoridella – Buss and Iverson, 1981: 2. (*lapsus calami*).

Type Species

Amphoroidea (*Amphoroidella*) *elliptica* Baker, 1908 (South Australia).

Diagnosis

Eubranchiate. Antennular peduncle articles 1 and 2 extended anteriorly as plates. Cephalosome not participating in outline of body; antennular peduncle article 2 juxtaposed to pereonite 1. Both sexes with pereon and pleon lacking dorsal processes. Pleon with posterior margin bearing one curved suture at each side. Both sexes with uropodal rami

lamellar; exopod reduced, housed in indentation on lateral margin of fused basis-endopod. Pleotelsonic apex entire, truncate, lacking marked ventral groove. Maxillipedal palp articles 2 to 4 bearing pronounced setigerous lobes. Pleopod 5 exopod with two low apical, toothed bosses and low medial boss. Sexual dimorphism not pronounced.

Adult Male

Smaller than ovigerous female. Appendix masculina arising from medio-proximal angle of endopod of pleopod 2 and extending just beyond ramal apex.

Ovigerous Female

Mouthparts not metamorphosed. Brood pouch formed from three pairs of oostegites arising from pereonites 2 to 4 and overlapping well in mid-line. Posteriorly pouch formed from large anteriorly directed pocket with bilobed lip opening between fourth pereopods. Brood not held in marsupium thus formed, but in internal pouches (number not currently known).

Remarks

Since its foundation *Amphoroidella* has been treated as a full genus (see Discussion), but no diagnosis has ever been provided. The characters possessed by *Amphoroidea* (*Amphoroidella*) *elliptica* do appear to warrant separation of this species as a distinct genus, and *Amphoroidella* is here formally raised to this level.

Amphoroidella differs from *Amphoroidea* in having the second article of the antennular peduncle extended anteriorly as a plate; in not having the cephalosome participating in the outline of the body; in having the first segment of the pleon inobvious; and in having a reduced uropodal exopod. In dorsal view, specimens of *Amphoroidella* bear some resemblance to specimens of the genus *Artopoles* Barnard (from Africa), but *Artopoles* has the epistome extended anteriorly; pereonite 7 not reaching the lateral margins of the body in dorsal view; the uropodal exopods more reduced; and the pleotelsonic apex bearing a very short median incision. (*Artopoles* is currently housed in the platybranchiate sub-family Cassidininae. In fact, both known species, *A. natalis* Barnard and *A. capensis* Barnard, are eubranchiata (personal observation of type and additional specimens) and *Artopoles* should be transferred to the sub-family Dynameninae).

• *Amphoroidella* contains only the type species, and is known only from South Australia.

Amphoroidella elliptica (Baker, 1908), comb. nov.

Figure 7

Amphoroidella elliptica Baker, 1908: 148-150, I61, pl. 6; – Hale, 1927: 319; – Hale, 1929: 296, 297; – Nierstrasz, 1931: 214.

Material Examined

Queenscliffe (Beare's Point), Kangaroo Island, South Australia (36°S, 137°E); on surface of living sponges; shallow water: 2 ovigerous females. Coll. Hale and Tindale, 1926 (South Australian Museum Reg. No. C825). Type specimens housed in South Australian Museum.

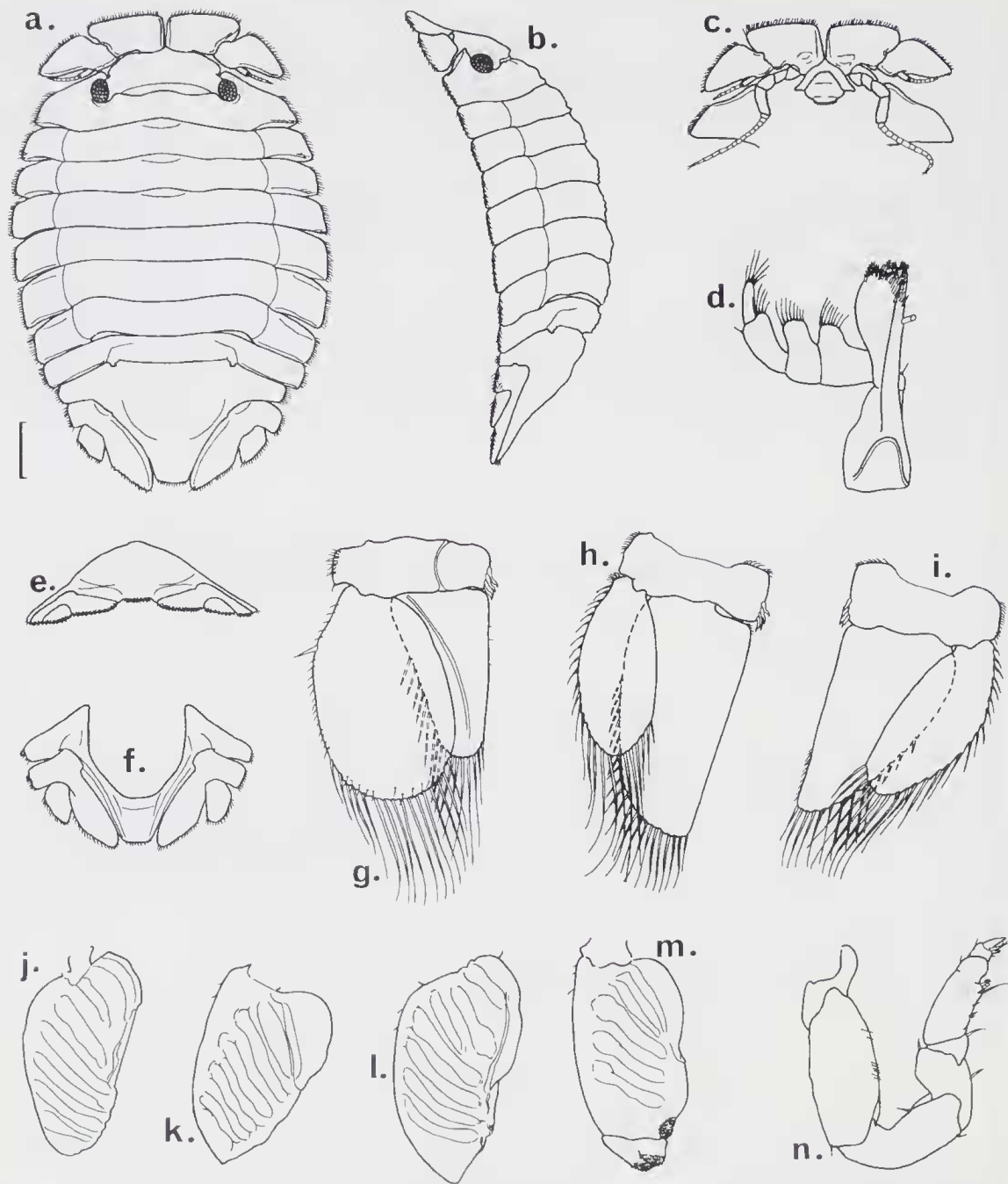


Figure 7 *Amphoroidella elliptica* (Baker), comb. nov. Ovigerous female, 774 μ m; (a) dorsal; (b) lateral; (c) ventral, anterior; (d) maxilliped; (e) pleotelson and uropods, posterior; (f) pleotelson and uropods, ventral; (g) to (i) pleopods 1 to 3 respectively; (j) pleopod 4, endopod; (k) pleopod 4, exopod; (l) pleopod 5, endopod; (m) pleopod 5, exopod; (n) pereopod 1. Scale line represents 1 mm.

Description

Ovigerous Female

Body flattened; dorsal surface smooth, covered with layer of soft 'skin' (of unknown composition). Pleotelson not markedly domed; apex narrow, truncate.

Antennular peduncle articles 1 and 2 flattened with setose anterior margins; article 3 reduced; flagellum short. Antenna unmodified. Epistome slender, lambdoid; apex short, acute, not visible in dorsal view. Mouthparts unmodified; maxillipedal palp article 4 bearing short, superior, distal seta. Pereopods moderately robust, unmodified. Pleopod 1 basis with four medial coupling hooks; endopod with medial half slightly thickened. Pleopod 3 exopod lacking articulation. Pleopod 5 exopod with complete sub-terminal articulation. Uropodal endopod extending just beyond pleotelsonic apex; exopod set in deep notch at base of endopod.

Remarks

This species bears some resemblance to the platybranchiate sphaeromatid *Chitonopsis spatulifrons* Whitelegge (from New South Wales and South Australia) but differs in not having the epistome extended between the antennules, in having a reduced cephalosome, and in having the pleonal sutures reaching the posterior, not the lateral, margins of the tergite.

A. elliptica is known only from Gulf St Vincent and Kangaroo Island, South Australia.

Genus *Platycerceis* Baker, 1926

'*Platycerceis*':n. subgen. Baker, 1926: 272.

Platycerceis – Hale, 1929: 293, 303; – Iverson, 1982: 249, 250.

Platycerceis Nierstrasz, 1931: 217. (unjustified emendation).

Type Species

Platycerceis hyalina Baker, 1926 (south and west Australia).

Diagnosis

Eubranchiate. Antennular peduncle article 1 not extended anteriorly as plate. Anterior margin of cephalosome narrowly rounded, dorso-ventrally flattened, extended anteriorly to cover proximal regions of antennules and antennae. Median rostral process directed postero-ventrally; rostral process and epistome never visible in dorsal view. Body extremely flattened; coxal plates directed laterally and extended as slender, separate, acute processes. Pereon and pleon lacking dorsal processes. Pleon with lateral margins extended as acute processes; dorsal surface bearing two long suture lines at each side, one reaching postero-lateral angle, other reaching posterior margin. Antennular peduncle article 1 bearing acute antero-distal and postero-distal processes. Pleopod 5 exopod bearing two sub-apical, extended, toothed bosses, one on each side of ramus; medial margin, at junction of proximal and distal articles, only weakly toothed, lacking prominent bosses. Uropodal rami extended, styliform, sub-equal.

Adult Male

Penes separate, short, with semi-circular tips. Appendix masculina long, arising from medial margin of endopod of pleopod 2, extending to pleotelsonic apex. Maxillipedal palp broad; articles 2 to 4 with pronounced setigerous lobes.

Ovigerous Female

Not known.

Remarks

The current status of *Platycerceis* is not clear (see Discussion). It is formally recognized here as a full genus. *Platycerceis* differs from the most closely related genus, *Cerceis* Milne Edwards, in the extreme flattening of the body, the extended separate coxal plates, the narrow styliform uropods, and the greater length of the appendix masculina. This genus is known only from the type species and ovigerous females have not been collected.

Platycerceis hyalina Baker, 1926

Figure 8

Platycerceis hyalina, n. subgen. and sp. Baker, 1926: 272, 273, 279, pl. 52.

Platycerceis hyalina - Hale, 1929: 303; - Iverson, 1982: 250.

Platycerceis hyalina - Nierstrasz, 1931: 217. (unjustified emendation)

Material Examined

Cockburn Sound, Perth, Western Australia (32°10'S, 115°40'E); dredged offshore, 3 miles west of B.H.P. 1 adult male. Coll. P. Cawthorn, 'Lancelin', 30.vii.1961. (Western Australian Museum Reg. No. 64-80). Type specimens are located in the South Australian Museum.

Description

Adult Male

Each pereonal tergite with posterior margin bearing row of short setae. Pleon and pleotelson smooth, lacking dorsal setae. Pleotelson flat, not domed; apex with narrow acute process each side of deep anteriorly rounded notch.

Antennular peduncle article 1 with acute distal processes enclosing proximal region of article 2; 21-articled flagellum reaching level of pereonite 4. Antenna with 18-articled flagellum reaching pereonite 4. Epistome lambdaoid. Mouthparts unmodified. Pereopods robust, lacking setae; propodi expanded with rows of stout inferior spines. Penes each twice as long as broad with semi-circular tip. Pleopod 1 basis with three medial coupling hooks. Pleopod 2 exopod bearing 15 marginal 'teeth'. Appendix masculina tapering distally, folded along most of length forming medially open channel; apex acute. Pleopod 3 exopod with complete sub-terminal articulation. Pleopod 4 exopod with small, lateral, marginal toothed boss. Pleopod 5 exopod with complete, but weak, sub-terminal articulation. Uropodal rami extending well beyond pleotelsonic apex; both rami with dorsal and ventral longitudinal ridges; exopod with lateral margin serrate.

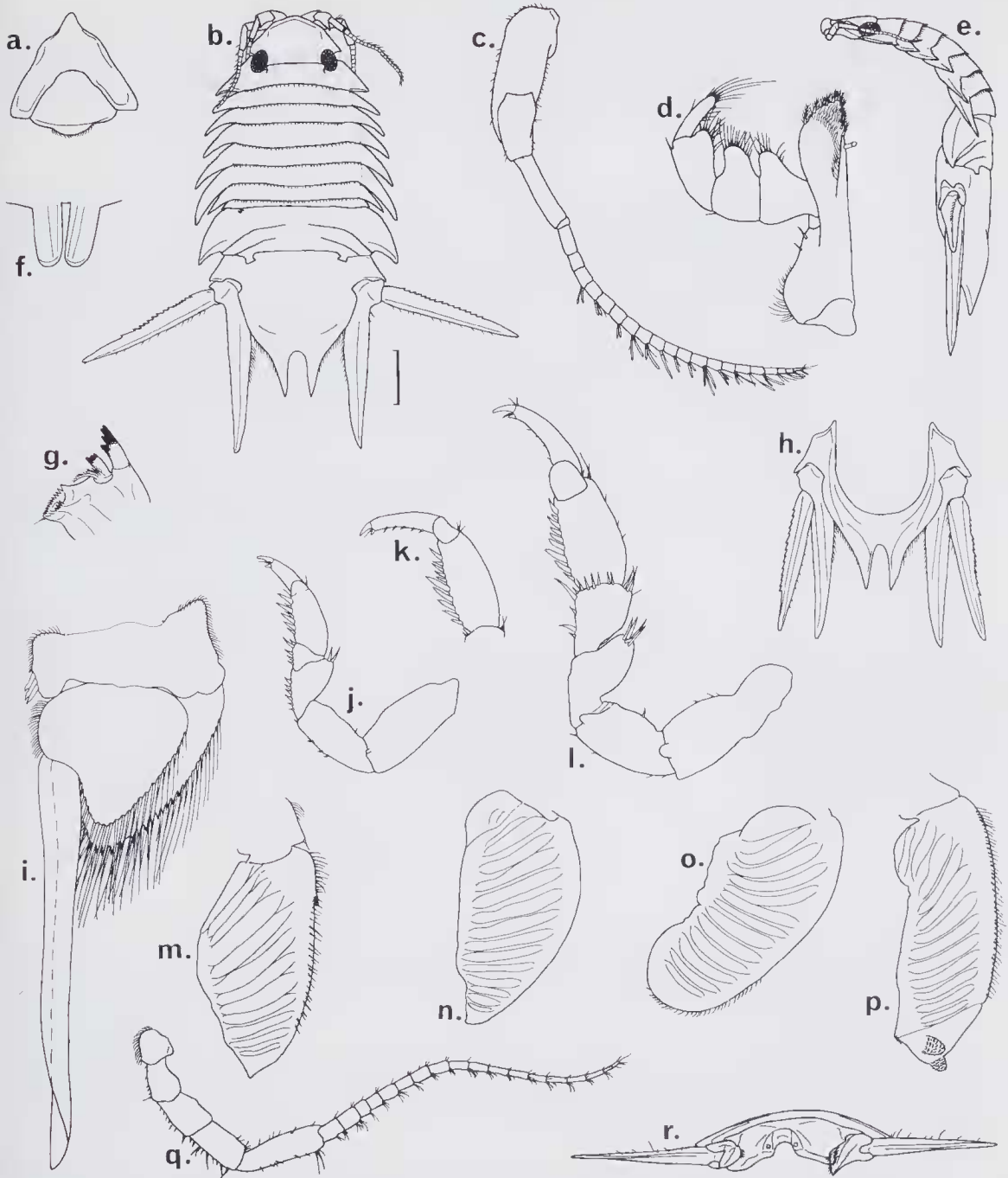


Figure 8

Platycercois hyalina Baker. Adult male, 7.01 mm: (a) epistome and labrum; (b) dorsal; (c) antennule; (d) maxilliped; (e) lateral; (f) penes; (g) left mandible; (h) pleotelson and uropods, ventral; (i) pleopod 2; (j) pereopod 1; (k) pereopod 2, propodus and dactylus; (l) pereopod 4; (m) pleopod 4, exopod; (n) pleopod 4, endopod, (o) pleopod 5, endopod; (p) pleopod 5, exopod; (q) antenna; (r) pleotelson and uropods, posterior. Scale line represents 1 mm.

Remarks

This species has only been recorded previously by Baker from Gulf St Vincent, South Australia. *P. hyalina* bears a strong resemblance in dorsal view to *Platynympha longicaudata* but lacks a median extension in the pleotelsonic notch, and is more flattened.

Discussion

The genus *Waiteolana* is currently housed in the subfamily Cassidininae. The discovery of *W. gibbera* sp. nov. and the associated ability to examine a number of specimens has shown that although the folding of the endopods of pleopods 4 and 5 is not strongly pronounced, it is clearly present, especially in unmounted pleopods. When pleopods are mounted as microslide preparations the folds may be less obvious. Re-examination of the mounted pleopods from the holotype of *W. rugosa* has shown that folds are present, not absent as previously reported (Baker, 1926: 276; Holdich and Harrison, 1981a: 635). This genus must be transferred to the sub-family Sphaeromatinae.

W. tuberculata Kussakin is known from only one specimen. Kussakin (1967) was not confident that this specimen belonged in the genus *Waiteolana*, and the incomplete original description does not allow detailed comparisons with the other species. *W. tuberculata* must be redescribed before its status can be clarified.

The history of the genus *Moruloidea* is rather involved. Baker (1908) established this genus to house his new species *M. lacertosa*. In 1914 Stebbing erected the genus *Euvallentinia* for the species *Cymodoce darwinii* Cunningham (from S. America) (For a more detailed discussion of the history of *Euvallentinia* see Loyola e Silva, 1974: 19-22). In 1926 Baker described a new species which he placed in the genus *Cassidinopsis* Hansen as *C. tasmaniae*. Baker appended his description of this species with the remark, 'In 1908 I established a genus, *Moruloidea*, knowing very little of its affinity. I now believe it to be very close to the present genus, (*Cassidinopsis*) and may have to be united to it in the future.' Nierstrasz (1931: 218) presumably acted on this suggestion when he included *M. lacertosa* in the genus *Cassidinopsis*.

Examination by the present author of specimens of *Euvallentinia darwinii* and type specimens of *Moruloidea lacertosa* and *Cassidinopsis tasmaniae* has shown that these three species appear to be congeneric. The only major difference between *M. lacertosa* and *E. darwinii* is that *M. lacertosa* is dorsally ornamented while *E. darwinii* is smooth. As dorsal tuberculation is known to vary between species in other sphaeromatid genera (e.g. *Sphaeroma* Latreille, *Ischyromene* Racovitza) the present author does not consider this difference sufficient to warrant separate generic status, and *Euvallentinia* is included here as a junior synonym of *Moruloidea*.

As *Cassidinopsis tasmaniae* is in fact a species of *Moruloidea*, it is not surprising that Baker – presumably assuming this species to be representative of *Cassidinopsis* – considered *Cassidinopsis* and *Moruloidea* to be so closely related. Examination of specimens of *Cassidinopsis emarginata* (Guérin-Méneville) has shown that *Cassidinopsis* is distinct from *Moruloidea* but is closely related to the genus *Anphoroidea* Milne Edwards.

The genus *Pseudosphaeroma* was originally described as eubranchiate, but was transferred to the hemibranchiate sub-family by Monod (1931b). Monod's action was based partly on the reduced pleopodal folding shown by *Pseudosphaeroma* specimens (compared with specimens of other eubranchiate genera), and partly on an analysis of non-pleopodal characters. Although pleopodal folds are reduced in number in *Pseudosphaeroma*, both rami of both pleopods 4 and 5 bear folds and this genus is clearly eubranchiate. Monod's opinions are rejected here and *Pseudosphaeroma* is transferred to the subfamily Dynameninae.

The three known species of *Pseudosphaeroma* strongly resemble one another, but as these species were described in different genera, a detailed comparison has never been made. The only differences between the three species appear to be in the form of the appendices masculinae and the dorsal tuberculation. However, Hurley and Jansen (1977: 68, 69) have stated that specimens of *P. campbellense* from New Zealand show variation in both these characters, this variation apparently being related to geographical location. The differences between *P. campbellense*, *P. lundae* and *P. tuberculatum* are so slight that there is possibly only one species of *Pseudosphaeroma*, extending around the Southern Hemisphere and varying with geographical location. However, until extensive comparative work is carried out to test this theory, it would be unwise to synonymise the three species. Such comparative work will also be required before a reliable character for separating these species (if any exist) can be found. The appendix masculina shows greater variation of form amongst the New Zealand specimens of *P. campbellense* than between the known species (Hurley and Jansen 1977: Fig. 62) and this structure must be considered unreliable for species separation. Despite inter-specific variation in the prominence of the dorsal tuberculation, no previously described specimen has the tubercles as pronounced as the present Australian material. However, as tuberculation is known to vary in *P. campbellense*, it is considered here that the greater tuberculation of the Australian material is not sufficient reason for designating these specimens as a separate species or sub-species. Poore (1981) illustrated specimens of *P. campbellense* from the Snares Islands which appear to show tuberculation intermediate between that of the Australian material and Hurley and Jansen's New Zealand material. It is possible that the Port Phillip specimens form the western end of a cline linking New Zealand and Australia. Although New Zealand and Australia share few species of peracarid crustaceans, at least one other sphaeromatid species, '*Cerceis*' *trispinosa* (Haswell), is found in both south-east Australia and New Zealand (recorded from New Zealand as *Cymodoce granulata* Miers).

Alternatively, the Australian population of *Pseudosphaeroma* may have been transported to Port Phillip by shipping. A number of sphaeromatid species are believed to have been dispersed in this way (e.g. *Sphaeroma walkeri* Stebbing, *Paradella diana* (Menzies)) (Carlton and Iverson 1981; Harrison and Holdich 1982a).

The genera *Amphoroidella* and *Platycerceis* were both originally described as subgenera, but subsequent authors have treated them as full genera without formally raising them to this level or providing any generic diagnoses.

Baker clearly erected *Amphoroidella* as a subgenus of *Amphoroidea*, but he described the type species as '*Amphoroidella elliptica*' and later referred to 'this genus' (implying

Amphoroidella rather than *Amphoroidea*) (Baker 1908: 148, 150). Although subsequent authors have treated *Amphoroidella* as a full genus, no reasons were given for the apparent elevation. Iverson (1982: 250) stated that Hale (1929) 'raised the name to full generic status without comment.' Hale (1929: 292) did separate *Amphoroidella* and *Amphoroidea* in his key to the genera, saying that the second article of the antennular peduncle was expanded in *Amphoroidella* but not in *Amphoroidea*, but this cannot be considered a generic diagnosis. It seems likely that Hale was not raising the status of *Amphoroidella*, but was merely copying Baker and using the binomen *Amphoroidella elliptica*. While doubt exists, and in the absence of a diagnosis, it seems wise to assume that *Amphoroidella* has never been raised to full generic rank.

When Baker described the subgenus *Platycerceis* he did not indicate to which genus it belonged. It was introduced following his new genus *Exocerceis* Baker, but does not show the characteristics of *Exocerceis* (Baker 1926: 271, 272). Baker may have formed *Platycerceis* as a subgenus of *Cerceis*, but in describing the 'teeth' on the exopod of pleopod I he stated 'as in *Cerceis*!' In the absence of a positive indication by Baker, *Platycerceis* has been treated as a full genus, and Iverson (1982: 250) suggested that Baker may never have intended it to be a subgenus. Iverson also stated that Hale (1929) raised *Platycerceis* to full generic rank without comment. Hale did say for *Platycerceis*; 'Distinguished from *Cerceis* by the more flattened body and the outstanding side-plates of the thorax' (1929: 303), but, as with *Amphoroidella*, Hale was probably following Baker's usage rather than actively raising the status of the taxon. To avoid further confusion, *Platycerceis* is here formally recognised as a full genus and a diagnosis is provided. The type species has been cited using the only binomen available, *Platycerceis hyalina*.

Postscript

Since going to press the author has become aware of two further publications relevant to the above work. Schultz (1978) described a new species, *Cassinidopsis tuberculata*, from the South Atlantic. This name is a senior homonym of *C. tuberculata* Sivertsen and Holthuis. Therefore, if *Pseudosphaeroma tuberculatum* proves to be a distinct species (see Discussion above) it will require a replacement name. *C. tuberculata* Schultz (based on one specimen) appears to be the female of a species of *Moruloidea*.

Kussakin and Vasina (1982) described two new species in the genus *Eivallentinia*, *E. fraudatrix* and *E. ornata*. Each species was founded on one female specimen and both were collected at Kerguelen Island. Unfortunately, without examining these holotypes the present author is unable to comment on their taxonomic status.

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¹ In the original copies of *Proc. Zool. Soc. Lond.* I can find no reference to volume numbers. They appear to rely on the year of issue only. In reference 1914b (above) '944' is the page number.